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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

NILAND, P

ART UNIT	PAPER NUMBER
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1714

DATE MAILED:

02/21/01

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	Examiner	Group Art Unit	

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication .
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- Responsive to communication(s) filed on 3/8/00
- This action is FINAL.
- Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- Claim(s) 131-181 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- Claim(s) _____ is/are allowed.
- Claim(s) 131-181 is/are rejected.
- Claim(s) _____ is/are objected to.
- Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- The proposed drawing correction, filed on _____ is approved disapproved.
- The drawing(s) filed on _____ is/are objected to by the Examiner.
- The specification is objected to by the Examiner.
- The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- All Some* None of the CERTIFIED copies of the priority documents have been received.
- received in Application No. (Series Code/Serial Number) _____.
- received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Attachment(s)

- Information Disclosure Statement(s), PTO-1449, Paper No(s). 2 Interview Summary, PTO-413
- Notice of Reference(s) Cited, PTO-892 Notice of Informal Patent Application, PTO-152
- Notice of Draftsperson's Patent Drawing Review, PTO-948 Other _____

Office Action Summary

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1. The preliminary amendment of 3/8/00 has been entered. Claims 131-181 are pending.

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 131-181 are rejected under the judicially created doctrine of obviousness-type

double patenting as being unpatentable over claims 1-125 of U.S. Patent No. 5853895 Lewno.

Although the conflicting claims are not identical, they are not patentably distinct from each other because, although the claims differ somewhat in scope, the patented claims fall within the scope of the instant claims. It would have been obvious to one of ordinary skill in the art at the time of the instant invention to make the instantly claimed invention based on the patented claims because the patented claims fall within the scope of the instant invention. Note the patented claims 19, 31, 37, and 108-113.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 131-166 are rejected under 35 U.S.C. § 103 as being unpatentable over US Pat. No. 5551197 Repp et al. in view of US Pat. No. 4963636 Mulhaupt et al., SAE Technical paper series 910758 "Application of RIM Urethane to One Side of Glass for Automotive Windows" Csokasy et al., US Pat. No. 3282014 Bamford et al., US Pat. No. 5072984 Jackson, US Pat. No. 5294168 Kronbetter, US Pat. No. 4793099 Friese et al., US Pat. No. 5508111 Schmucker, US Pat. No. 5338767 Sartelet et al. , US Pat. No. 4364214 Morgan et al., US Pat. No. 4743672 Goel, Betamate 73100/73003 Technical Bulletin, the Betamate Structural Adhesives data table, and US Pat. No. 4995666 Schurmann.

Repp et al. discloses a vehicle window assembly in which the window mounting members are adhered to only the inner surfaces of the glass panel. This arrangement falls within the structural arrangement of the instant claims. See the abstract; figures 1-15; column 1, lines 5-10; column 2, lines 6-68; column 3, lines 1-57; column 4, lines 40-50; and column 5, lines 1-10. Repp et al. discloses adhering the glass to the hinge using a layer of hotmelt urethane adhesive as a temporary fixturing adhesive and a curable polyurethane adhesive that gives a permanent bond (column 7, lines 12-55). Repp et al. prefers urethane adhesives (column 8, lines 47-50).

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It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the instantly claimed rapid set, rapid cure, two component urethane adhesives because the broad recitation of urethane adhesives by Repp et al. encompasses such adhesives, the preferred one component adhesives of Repp et al. (column 8, lines 39-47) do not teach away from the two component adhesives, and Sartelet et al., Csokasy et al., Mulhaupt et al., and Goel et al. disclose the use of two component adhesives for bonding metal to glass.

Sartelet et al. shows two component polyurethanes, which contain "plural amines" to be useful for bonding windows to window profiles at column 1, lines 15-31 and that such adhesives may be cured in 1 minute to about 5 hours (column 1, line 65 to column 2, line 11). This falls within the scope of the instantly claimed set time period and rapid cure. The examiner notes that his personal experience with adhering substrates to other substrates generically has shown him that adhesives are often sold based upon their set and cure times, i.e. the label defines many two part adhesives in terms of how long they take to cure and routine consideration of the thing to be bonded gives the ordinary skilled artisan the information needed to determine how fast the set should be. It is really a matter of "design choice". If you do not wish to set up elaborate time consuming, expensive jigs, braces, or other holding means, you use a fast set adhesive. If the jigs are going to be there anyway, i.e. when you build an airplane, slower set adhesives are usable.

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The ordinary skilled artisan can see that time is money and in an assembly line application, such as building cars, quicker is better.

The applicant's arguments with regard to column 2, lines 1-14 of Sartelet et al. are noted. Proper grammatical interpretation of the sentence of column 2, lines 7-11 means that the times of column 2, lines 10-11 refer back to "potlife". This is supported by column 5, lines 19-22 and 57-59. Potlife is indicative of "cure". The applicant shows no evidence that the instantly claimed set and cure are not possessed by the composition of Sartelet et al..

The compositions of Sartelet et al. contain amines, which falls within the scope of the instant claims.

Csokasy et al. teaches the bonding strength of two component polyurethanes to glass. See the entire document. Note that RIM polyurethanes are two component polyurethanes. Figure two shows the use of glass frit to aid adhesion through the clear increase of surface area and corresponding increase in the number of adhesive bonds which give greater overall adhesion.

Mulhaupt et al. discloses the use of two component polyurethanes as adhesives for bonding metal, glass, and plastics (column 3, lines 24-44; column 4, lines 55-68; column 5, lines 1-16 and 65-68; and column 6, lines 1-16. Column 6, lines 55-56 show that the intention of the patentee is to bond glass to metal.

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Goel discloses the use of two component polyurethanes for bonding glass, metal, and plastic and the reasons which polyurethane adhesives are desirable in such bonding uses at column 1, lines 5-68; column 2, lines 1-68; column 3, lines 1-68; column 4, lines 1-68; and column 5, lines 1-21.

Bravet et al. discloses the use of two component polyurethanes to adhere safety glass to the vehicle at column 1, lines 41-52 and throughout the reference.

Many of the instant claims are silent with respect to the specific identities of the ingredients of the polyurethane adhesive composition. No unexpected results are demonstrated stemming from the use of the broadly claimed urethane adhesives of these claims, in a manner which is commensurate in scope with the cited prior art and the instant claims.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the two component polyurethane adhesive of Schmucker as the two component polyurethane adhesive referred to in the above paragraph because the skilled artisan would have expected such a polyurethane to adhere to primed glass and metal, as taught above and at column 4, lines 37-51 in addition to lending the improved properties of Schmucker to the adhered assembly and the method of making the assembly. The composition of Schmucker falls within the scope of the composition of the instant claims 131-147 and 152-163. See the entire document.

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It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the amines of the instant claim 148-151 and 164-166 in the above discussed two component polyurethane adhesives because they are expected to give the sag resistance formed via the hydrogen bonding of the urea groups formed upon their rapid reaction with NCO as described by Goel and Schmucker and the physical properties described in the betamate literature, and the applicant states that these are conventionally used in two part polyurethane adhesives such as the betamates described above.

Column 5, lines 11-68 and column 6, lines 1-14, of Repp et al., discloses the use of ceramic frit, which falls within the scope of the instant claims.

The windows disclosed by Repp et al. fall within the scope of the claimed window structures of the instant claims (see the figures; column 2, lines 6-23; column 4, lines 40-50; column 5, lines 1-11; and column 11, lines 4-20).

Schurmann discloses the window mechanical structure, including the use of adhesive in general (column 2, lines 57-61 and the entire document), of the instant claims, but not the particulars of the adhesion composition and attachment points such as glass frit and primer.

Friese et al. discloses the mechanical structure of the sliding window of the instant claims 126-130 except that it does not disclose the use of the instantly claimed adhesive. See the entire document.

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Kronbetter discloses the mechanical structure of the sliding window of the instant claims 126-130 except that it does not disclose the use of the instantly claimed adhesive. See the entire document.

Jackson discloses the mechanical structure of the window of the instant claims 124-125 except that it does not disclose the use of the instantly claimed adhesive. See the entire document.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the adhesives of the instant claims to adhere automotive window glass to any of the instantly claimed assemblies of claims because it is generally known to adhere glass to metal or plastic using the instantly claimed two component polyurethane compositions, as shown by Repp et al., Sartelet et al., Csokasy et al., Mulhaupt et al., and Goel and these window structures are expected to be subject to less stress than the hinged windows of Repp et al..

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to apply the adhesive bead discussed above in the thicknesses of the instant claims because such thicknesses are disclosed by Repp et al. at column 7, lines 34-38.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the glass primers and the fritted glass of the instant claims to increase the bonding of the polyurethane to glass because such expedients are known to the ordinary skilled artisan as taught by Repp et al. (column 8, lines 60-68 and column 9, lines 1-23),

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Morgan et al. in the abstract, Csokasy et al. at Figure 2, and Bamford et al. at column 2, lines 22-60 and such fritted material will provide an area of larger surface area to which the adhesive can bond more strongly due to the corresponding increased number of adhesive bonds and mechanical friction.

The method of adhesion of the instant claims is encompassed by that of the above references to bonding glass to a structural member with two component polyurethane.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the automated application methods of the instant claims and inductive heating according to the instant claim 69 because inductive heating of two component polyurethanes is well known for increasing cure rates of the urethanes as taught by the Betamate Structural Adhesives data table which states "All Two Component Urethanes Can Be Induction Cured."; Betamate 73100/73003 Technical Bulletin describes the automated application of such polyurethane adhesives; the instant specification shows the claimed apparatus limitations to be well known; and Repp et al. discloses the use of robotics to attach the disclosed components at column 10, lines 35-38.

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to attach members, such as the rear view mirror, to automobile glass using the method of Repp et al. because these items are typically adhered to the glass and, if the method of Repp et al. can hold a window which is subject to opening and closing forces, it is expected to hold objects subject to much lesser forces adequately. Conventional

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methods of holding the rear view mirror often fail, as I have personally had to reattach about a dozen rear view mirrors for people. The acrylate adhesives sold for this purpose typically don't last past two years. The method of adhesion of Repp et al. would have been expected to be a great improvement in adhering rear view mirrors and other objects which are subject to less stress than the windows of Repp et al..

6. The instant claims 167-181 are allowable over the cited prior art for reasons of record in the parent applications. Specifically, as is clear from the prior record, the instant language "adhesive layer consisting essentially of" was used to exclude the additional adhesive layers of Repp. There is no motivation to use the instantly claimed adhesives without the additional layers of Repp nor suggestion in the prior art that such a structure would hold together as required by the applications in which such window assemblies are used.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Niland whose telephone number is (703) 308-3510. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-5408.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

pn

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February 19, 2001



Patrick Niland
Primary Examiner
Art Unit 1714